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10/086,825	03/04/2002	You-Sub Lee	P56584	2929

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EXAMINER	
HARVEY, DAVID E	

ART UNIT	PAPER NUMBER
2614	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/086,825	LEE, YOU-SUB	
	Examiner	Art Unit	
	DAVID E HARVEY	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2001-78120 to *"NEC VIEW TECHNOLOGY"*.

I. Japanese Patent Document #2001-78120:

As is shown in figure 3, Japanese Patent Document #2001-78120 illustrates a conventional embodiment of a image display apparatus which comprised:

A) A display cabinet that includes:

1) A ***front cover*** (202);

2) A ***rear cover*** (203);

3) A display panel (201); and

3) A ***main circuit board*** (205);

B) A base cabinet (207), mechanically and electrically attached to the display cabinet, which includes:

1) A ***television tuner unit*** (211) composed of a ***TV tuner*** (215).

Figure 2(B) of Japanese Patent Document #2001-78120 illustrates an improved version of the conventional embodiment of figure 3, wherein this improved version, the ***television tuner unit*** is contained within a ***housing*** (7a) that can be detachably connected to the ***rear cover*** of the display cabinet. As illustrated, the ***television tuner unit*** has an ***electrical connector*** (13b) protruding from the housing (7a) that connects to a ***connection port*** (13a) that is recessed within a "***receptacle***" formed "***in***" the outside surface of the rear cover.

II. Differences:

Claim 1 differs from the embodiment shown in figure 2(B) of Japanese Patent Document #2001-78120 only in that claim 1 recites a "receptacle" that is formed "on" the surface of the *rear cover* of the display cabinet into which the detachable ***television tuner unit*** is inserted; i.e. such a receptacle is not explicitly shown in figure 2(B) of the Japanese Patent Document.

III. Obviousness:

When implementing the display apparatus shown in figure shown in figure 2(B) of Japanese Patent Document #2001-78120, it would have been obvious to one of ordinary skill in the art to have provided a recess in the rear cover of the cabinet to protect the detachable television tuner unit from receiving lateral impacts that would otherwise dislodge, or damage the electrical connectors of, said tuner unit; i.e. the examiner taking Official notice that the need for such protective recesses for detachable units having been notoriously well known in the art (i.e. the video gaming cartridge/player art, the computer/memory card art, etc,…).

3. Claims 2, 5, 6, and 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2001-78120 to *"NEC VIEW TECHNOLOGY"* for the same reason as addressed for claim 1 above. Additionally, the following is noted:

1) With respect to claim 5:
In the modified system, the plane/face of the connection port is parallel the insertion direction;

2) With respect to claim 6:
It was notoriously well known in the electronics arts to have provided sliding door elements to cover the electrical connectors when detachable peripheral components/unit are not connected thereto thereby protecting the connectors from damage and external environment conditions such as

dust. It would have been obvious to one of ordinary skill in the art to provide the rear cover of the modified system of the Japanese Patent document with such conventional means of protection to protect the "connection port".

3) With respect to claim 9:
It was notoriously well known in the electronics arts to have provided removable plugs to cover the electrical connectors when detachable peripheral components/unit are not connected thereto thereby protecting the connectors from damage and external environment conditions such as dust. It would have been obvious to one of ordinary skill in the art to provide the rear cover of the modified system of the Japanese Patent document with such conventional means of protection to protect the "connection port".

4) With respect to claims 10:
The "connection port" comprises a plug "member" for coupling the tuner unit to the outside surface of the rear cover.

5) With respect to claims 11:
Providing a screw to fix the tuner unit to the display device in order to provide a more permanent attachment of the tuner unit to the display device would have been an obvious way of preventing the tuner unit from being disengaged/detached from the display device by accident.

6) With respect to claim 12:
While the Japanese Patent Document does not state that the video inputs are provided from the tuner unit to the main board via the RGB cable in digital form, such would have at least been an obvious choice of design given the fact that flat panel displays were conventionally driven via digital video signaling.

7) With respect to claims 13-15:
As evidenced by figure 3 of the Japanese Patent Document, the housing of the tuner unit (e.g. 7a of figure 2(B)) necessarily included a hole (@ 214) through which an antenna (e.g. (@ 221) can be attached (protrude therefrom). With respect to claim 14, it is noted that the side on which this hole is located is an obvious choice (i.e. there is no criticality to the side on which it is located).

4. Claims 3, 4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2001-78120 to *"NEC VIEW TECHNOLOGY"*, for the same reason as addressed for claim 1 above, in view of Sugimoto et al. [US #4,969,046]. The following is noted:

The claims differ from the showing of figure 2(B) of the Japanese Patent Document in that claims 3 and 4 recite a "earth spring" that protrudes from the rear cover and contacts an earth terminal of the tuner unit whereas, as shown in figure 2(B), the electrical connections of the apparatus described in the Japanese Patent Document are provided via a plug.

As illustrated in figure 9, Sugimoto et al. describe an apparatus in which a tuner unit (@ 3) can be detachably connected to the rear cover of a display device (@ 2). The illustrated apparatus includes:

a) A mechanical mating system (@ 42 and 22) for fixedly coupling the tuner unit to the display device; and

b) An electrical coupling system (@ 17 and 37) in which a plurality of pins (@ 18) located on one of the tuner/display engage respective contacts (@ 38) located on the other one of the tuner/display (@ 38); wherein at least one of the pins/contact provide an earth/ground connection.

While not explicitly stated, from the illustration of figure 9, one skilled in the art would have recognized the illustrated contacts (@ 38) as having been spring loaded as would be required to ensure a good connection between the pins and contacts.

It would have been obvious to one of ordinary skill in the art to modify the system shown in figure 2(B) of the Japanese Patent Document with mechanical and electrical coupling systems described in Sugimoto et al. Such a modification would have been advantageous/desirable in that it would have inhibited the components from becoming accidentally disengaged/detached.

5. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2001-78120 to *"NEC VIEW TECHNOLOGY"* for the same reason as addressed for claim 1 above. The following is noted:

1) With respect to claims 13-15:
As evidenced by figure 3 of the Japanese Patent Document, the housing of the tuner unit (e.g. 7a of figure 2(B)) necessarily included a hole (@ 214) through which an antenna (e.g. (@ 221) can be attached (protrude therefrom). With respect to claims 14 and 16, it is noted that the side on which this hole is located is an obvious choice (i.e. there is no criticality to the side on which it is located).

6. *Alternatively*, claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2001-78120 to *"NEC VIEW TECHNOLOGY"*, for the same reason as addressed for claim 1 above, in view of Sugimoto et al. [US #4,969,046]. The following is noted:

The claims differs from the showing of figure 2(B) of the Japanese Patent Document in that figure 2(B) does not illustrate the housing of the housing of the tuner unit (7a) as comprising a hole from which an antenna protrudes.

Figure 9 of Sugimoto et al. evidences the obviousness of having provided a side of detachable tuner units (@ 3) with a hole through which the antenna protrudes.

Clearly, the tuner unit (7a) of the Japanese Patent Document must be provided with an antenna for receiving TV signal broadcasts. Proving a hole in the housing for attaching the required antenna would have been an obvious choice of design as evidenced via figure 9 of Sugimoto et al. [With respect to claims 14 and 16, it is noted that the side on which this hole is located is an obvious choice (i.e. there is no criticality to the side on which it is located)].

7. Claims 17-21, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2001-78120 to *"NEC VIEW TECHNOLOGY"* for the same reason as addressed for claims 13-16 above. The following is noted:

I. Differences:

The claims differ from the embodiment shown in figure 2(B) of Japanese Patent Document #2001-78120 only in that claim 1 recites a "receptacle" that is formed "on" the surface of the *rear cover* of the display cabinet into which the detachable ***television tuner unit*** is inserted; i.e. such a receptacle is not explicitly shown in figure 2(B) of the Japanese Patent Document.

II. Obviousness:

When implementing the display apparatus shown in figure shown in figure 2(B) of Japanese Patent Document #2001-78120, it would have been obvious to one of ordinary skill in the art to have provided a recess in the rear cover of the cabinet to protect the detachable television tuner unit from receiving lateral impacts that would otherwise dislodge, or damage the electrical connectors of, said tuner unit; i.e. the examiner taking Official notice that the need for such protective recesses for detachable units having been notoriously well known in the art (i.e. the video gaming cartridge/player art, the computer/memory card art, etc,…).

8. Claims 17-21, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2001-78120 to *"NEC VIEW TECHNOLOGY"* in view of Sugimoto et al. [US #4,969,046] for the same reasons addressed for claims 13-16 above. The following is noted:

I. Differences:

The claims differ from the embodiment shown in figure 2(B) of Japanese Patent Document #2001-78120 only in that claim 1 recites a "receptacle" that is formed "on" the surface of the *rear cover* of the display cabinet into which the detachable ***television tuner unit*** is inserted; i.e. such a

receptacle is not explicitly shown in figure 2(B) of the Japanese Patent Document.

II. Obviousness:
When implementing the display apparatus shown in figure shown in figure 2(B) of Japanese Patent Document #2001-78120, it would have been obvious to one of ordinary skill in the art to have provided a recess in the rear cover of the cabinet to protect the detachable television tuner unit from receiving lateral impacts that would otherwise dislodge, or damage the electrical connectors of, said tuner unit; i.e. the examiner taking Official notice that the need for such protective recesses for detachable units having been notoriously well known in the art (i.e. the video gaming cartridge/player art, the computer/memory card art, etc,…).

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2001-78120 to *"NEC VIEW TECHNOLOGY"* in view of Sugimoto et al. [US #4,969,046] for the same reasons addressed for claim 17 above. The following is noted:

The claims differ from the showing of figure 2(B) of the Japanese Patent Document in that claims 3 and 4 recite a "earth spring" that protrudes from the rear cover and contacts an earth terminal of the tuner unit whereas, as shown in figure 2(B), the electrical connections of the apparatus described in the Japanese Patent Document are provided via a plug.

As illustrated in figure 9, Sugimoto et al. describe an apparatus in which a tuner unit (@ 3) can be detachably connected to the rear cover of a display device (@ 2). The illustrated apparatus includes:

a) A mechanical mating system (@ 42 and 22) for fixedly coupling the tuner unit to the display device; and

b) An electrical coupling system (@ 17 and 37) in which a plurality of pins (@ 18) located on one of the

tuner/display engage respective contacts (@ 38) located on the other one of the tuner/display (@ 38); wherein at least one of the pins/contact provide an earth/ground connection.

While not explicitly stated, from the illustration of figure 9, one skilled in the art would have recognized the illustrated contacts (@ 38) as having been spring loaded as would be required to ensure a good connection between the pins and contacts.

It would have been obvious to one of ordinary skill in the art to modify the system shown in figure 2(B) of the Japanese Patent Document with mechanical and electrical coupling systems described in Sugimoto et al. Such a modification would have been advantageous/desirable in that it would have inhibited the components from becoming accidentally disengaged/detached.

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2001-78120 to *"NEC VIEW TECHNOLOGY"* for the same reason as addressed for claim 17 above. The following is noted:

It would have been obvious to one of ordinary skill in the art to provide a door (or cover) over the receptacle of the display device to provide a finished look to the display device and to protect tuner unit from being damaged.

11. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2001-78120 to *"NEC VIEW TECHNOLOGY"* in view of Sugimoto et al. [US #4,969,046] for the same reasons addressed for claim 17 above. The following is noted:

It would have been obvious to one of ordinary skill in the art to provide a door (or cover) over the receptacle of the display device to provide a finished look to the display device and to protect tuner unit from being damaged

12. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2001-78120 to *"NEC VIEW TECHNOLOGY"* in view of Sugimoto et al. [US #4,969,046] for the same reasons addressed for claim 17 above. Additionally, the following is noted:

While the Japanese Patent Document does not state that the video inputs are provided from the tuner unit to the main board via the RGB cable in digital form, such would have at least been an obvious choice of design given the fact that flat panel displays were conventionally driven via digital video signaling.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID E

HARVEY whose telephone number is (703) 305-4365. The examiner can normally be reached on M-F from 6AM to 3PM

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached on 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAVID E HARVEY
Primary Examiner
Art Unit 2614